

REMARKS

Claims 1, 6, 26-29, 32-36 and 39 are pending in the application.

As indicated in the Examiner's non-final Office Action mailed on May 13, 2008, claims 1, 6, 26-29, 32-36 and 39 as amended in the Applicant's communications filed on January 21, 2008 and April 10, 2008 are rejected. No claims have been allowed.

Claim Rejections - 35 USC § 103

Claims 1, 6, 26-27, 29, 33-34 and 36 are rejected under 35 U.S.C. 103(a) as being anticipated by Sawada (JP 8-39860) in view of Uebbing et al. (US 4,982,203).

Claims 28 and 35 are rejected under 35 U.S.C. 103(a) as being anticipated by Sawada (JP 8-39860) in view of Uebbing et al. (US 4,982,203) as applied to claims 1 and 6 and further in view of Bollandsee et al. (US 5,640,190).

Claims 28 and 35 are rejected under 35 U.S.C. 103(a) as being anticipated by Sawada (JP 8-39860) in view of Uebbing et al. (US 4,982,203) as applied to claims 1 and 6 and further in view of Kawabe et al. (US 5,812,176).

Independent Claims 1 and 6

Claims 1 and 6 are similarly amended as follows:

1 (currently amended). A method for repeatedly tailoring light output from light emitting diodes (LEDs) in a printhead of a printer or electrophotographic copier that exposes a charged photosensitive member to light from the LEDs, the method comprising:

repeatedly calculating a light-output correction for each of a plurality of subsets of the LEDs, each subset being controlled by a respective one of a plurality of different controllers, each light-output correction for one of the LED subsets being calculated based at least upon factors pertaining to (a) a light output from the one LED subset associated with the light-output correction being calculated for that subset, and (b) an average light output from the plurality of subsets of the LEDs, wherein each light-output correction for one of the LED subsets facilitates correction of the light output from its associated LED subset as a function of more or less applied voltage or more or less supplied current, and wherein each calculation of a light-output correction occurs in response to an

exposure requirement change in the printer or electrophotographic copier that is within a full exposure range of the printhead; and

adjusting the light output from the LED subsets as a function of more or less applied voltage or more or less supplied current in accordance with their corresponding light-output corrections, so that a dimmer LED receives more voltage or current and a brighter LED receives less voltage or current, each time light-output corrections are calculated in response to an exposure requirement change in the printer or electrophotographic copier that is within a full exposure range of the printhead;

wherein each of the plurality of subsets of the LEDs includes more than one LED.

6 (currently amended). A printer comprising:

a printhead comprising a plurality of radiation emitting recording elements configured at least to record image data on a recording medium; and

a correction device configured at least to:

measure output emission characteristics of recording elements;

repeatedly calculate an emission correction for each of a plurality of subsets of the recording elements, each subset being controlled by a respective one of a plurality of different controllers, each emission correction for one of the recording element subsets being calculated based at least upon factors pertaining to (a) a radiation emission from the one recording element subset associated with the emission correction being calculated for that subset, and (b) an average radiation emission from the plurality of subsets of the recording elements, wherein each emission correction for one of the recording element subsets facilitates correction of the radiation emission from its associated recording element subset as a function of more or less applied voltage or more or less supplied current, and wherein each calculation of an emission correction occurs in response to an exposure requirement change in the printer that is within a full exposure range of the printhead; and

alter the radiation emission of the subsets of the recording elements as a function of more or less applied voltage or more or less supplied current in accordance with the emission corrections, so that a dimmer recording element receives more voltage or current and a brighter recording element receives less voltage or current, each time emission corrections are calculated in

response to an exposure requirement change in the printer that is within a full exposure range of the printhead;

wherein each of the plurality of subsets of the recording elements includes more than one recording element.

Support for the amendments to claims 1 and 6 can be found in the specification, for example at page 1, line 27, page 11, lines 1-4, page 12, lines 4-6, page 13, lines 24-25, and page 14, lines 22-23.

Sawada

A certified translation of Sawada is provided, which is an improvement to the earlier translation of Sawada previously relied on by the Examiner and the Attorney for Applicant(s). It is suggested that the Examiner use the certified translation for further examination of the pending claims.

In unobvious contrast to claims 1 and 6 as similarly amended, Sawada does not teach or suggest that a light-output (claim 1) or emission (claim 6) correction for LED's in a chip is "repeated" "in response to an exposure requirement change in the printer that is within a full exposure range of the printhead". Nor does Sawada teach or suggest altering the light output or radiation emission "each time light-output [or emission] corrections are calculated in response to an exposure requirement change in the printer that is within a full exposure range of the printhead".

It is noted that in Sawada steps S11-S16 are performed "repeatedly" when the driving current is changed (step S17). However, the driving current is changed only when the virtual average exposure energy EA and the target value E0 are not in agreement with each other. Once in step S16 the virtual average exposure energy EA becomes in agreement with the target value E0, the method comes to an end. See [0021] and [0024] in Sawada. This is not the same as claims 1 and 6 as similarly amended,

Uebbing et al.

The Examiner in rejecting claims 1 and 6 states that "Sawada teaches adjusting the time duration of the modulated current to correct for the light output of the LED and thus fails to teach the correction of the light output from each LED subset being a function of more or less applied voltage nor more or less supplied current".

Then he goes on to argue that if one altered the magnitude of the supplied current or the pulse width of the modulated current in Sawada, this would be the

same as adjusting the time duration of the modulated current to correct for the light output of the LED in Sawada. The basis for this change to Sawada is that it is well known in the art that "one can adjust the light quantity output of the LED by altering either the magnitude of the supplied current or the pulse width of the modulated current".

However, such reasoning appears to ignore steps S12 and S13 in Sawada, "allocating the time correction bit for each LED" and "computing the exposure energy for each LED on the basis of *** the temporarily allocated time correction bit", See claim 1 in Sawada. Steps S12 and S13 appear to contradict the Examiner's suggested way of modifying Sawada.


The Dependent Claims

For the sake of brevity, this response omits any discussion of the dependent claims. However, the right to present differences between the dependent claims and the cited art is preserved in regard to further prosecution and/or appeal.

CONCLUSION

This response seeks to convince the Examiner to remove the non-final rejection of the claims. Failing that, the Examiner is requested to call the undersigned Attorney for Applicant(s) in the event that a telephone interview will expedite prosecution of the application towards allowance or reduce the issues for purposes of an appeal. Also, any suggestion for amending the claims in regard to allowability, which the Examiner cares to offer, would be appreciated.

Respectfully submitted,


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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.